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Common ownership and firm dividend policies

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ABSTRACT

This paper examines the relationship between common owners and firm dividend policy. We find that dividend policies of firms *newly added* to an investor's portfolio evolve towards the dividend policies of the existing firms in this portfolio. This relationship is neither driven by owners targeting firms forecasted to change their dividend policies, nor by firms with a similar dividend strategy to the companies in the new investor's existing portfolio. Our results suggest that owners have a *dividend policy style*, and that their influence depends on the type of co-owner and the existing governance characteristics of the co-purchased firm.

1. Introduction

Common owners are shareholders having stocks of multiple companies. Their existence affects firm outcomes (Edmans et al., 2019) such as management incentives (Anton et al., 2016), product markets (Azar et al., 2018, 2016; He and Huang, 2017), technological process and innovation (Geng et al., 2016; Kostovetsky and Manconi, 2016), disclosure policy (Jung, 2013), supply chain management (Freeman, 2016), firm's equity and debt markets (Anton and Polk, 2014; Cici et al., 2015), or shareholders proposals (He et al., 2018). However, little is known about the influence of common owners on corporate financial decisions. Evidence of common ownership effect on corporate finance is limited to mergers and acquisitions activity (Matvos and Ostrovsky, 2008; Harford et al., 2011; Brooks et al., 2016), capital structure and cash management (Semov, 2017).

In this paper we investigate the role of common ownership on a firm's dividend policy. This policy has strong effects on firm outcomes and is deeply affected by its shareholders' characteristics (DeAngelo and DeAngelo, 2000; Pindado et al., 2012; Sekerci, 2020; Crane et al., 2016; Gaspar et al., 2012).

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The literature above suggests that common owners promote similarities in corporate strategies (e.g., product, technological, innovation and other processes) of the firms in their portfolios. Therefore, it is natural to wonder if common owners do so in the dividend choices as well. Following Edmans et al. (2019), this paper focuses on influential common owners as their incentives to affect firm decisions are greater.

Accordingly, we conjecture a positive relationship between dividend yield of the co-owner's existing portfolio and that of the firm she adds to her portfolio. Specifically, we ask 1) Do common owners apply a similar dividend strategy in the firms they co-own (i.e., do they have a "dividend style"?); 2) Does this style vary with co-owners type, ownership, portfolio characteristics, or expertise?; 3) Does this style vary according to the governance settings of the newly purchased firm (e.g., existing ownership structure, main owner's identity)?

We use detailed ownership data from Sweden. The Swedish setting offers us two main advantages to study common owners. First, as we focus on influential common owners, we study the top five owners of firms. In Sweden, these top five owners are represented in nomination committees and can appoint board members (Dent, 2013). Therefore, they have strong incentives to enhance governance and influence the corporate policies of the firm. Second, Swedish data provides detailed information on ownership by its type (e.g., institutional investors, family owners).[2] This separation is important as not only institutional investors but also family owners are influential across Continental Europe (Faccio and Lang, 2002). The Swedish ownership data we exploit have been previously used in Cronqvist and Nilsson (2003), Giannetti and Simonov (2006), and Ravid and Sekerci (2020). The advantage of the Swedish setting is particularly underlined by Giannetti and Simonov (2006) and summarized in the following sentence: "The Swedish stock market offers a unique context in which to analyze issues related to investor behavior and corporate governance, and allows conclusions to be drawn, which go well beyond the Swedish market" (Giannetti and Simonov, 2006, page 1511). Given the similar level of ownership concentration, our results could be useful not only for Continental Europe (e.g., Boubaker et al., 2016; Maury and Pajuste, 2005), but also Far East countries (e.g., Attig et al., 2009).

We find a positive and significant relationship between the dividend yield in the *new* and in the *existing* firms of a co-owner's portfolio. This co-owner's style in dividend policy is significant mainly when the co-owner is a financial firm, has sector expertise and a large portfolio of firms associated with highagency conflicts. We provide evidence suggesting that stock selection is not driving the "dividend style" results as institutional investors do not target firms whose dividend policy is similar to those of existing firms in their portfolio.

The paper has several contributions. First, it provides evidence on the relationship between common ownership and corporate dividend policy. Second, it is the first study to show evidence on common ownership from Continental Europe. Third, it examines the role of all *influential* common owners including family common owners. Past literature focuses only institutional common owners who tend to hold less than 1% of the firm shares (e.g., He et al., 2018). Fourth, in contrast to prior studies that concentrate on the existing portfolios of co-owners, we assess their portfolio formation considerations.

2. Data

Our sample covers the period 2000–2014 and includes 193 firms (excluding banks and insurance companies) that are listed on the Nasdaq-OMX stock exchange in Stockholm and domiciled in Sweden. We obtain accounting and firm characteristics data from Datastream and annual reports. Ownership data are collected manually from the ownership database called Modular Finance AB (SIS Ägarservice AB previously) and also used in Cronqvist and Nilsson (2003), Giannetti and Simonov (2006), and Ravid and Sekerci (2020).

Variable definitions are provided in the Appendix. Table 1 presents the data. We highlight that the largest owner, on average, holds a substantial fraction (22.8%) of firm shares, and the third owner, on average, is a blockholder (i.e., an owner who has at least 5% of a firm's shares) (Table 1, Panel A). The majority of co-purchasers are financial institutions, and they buy a smaller fraction of firm shares compared to familyco-purchasers (Table 1, Panel B). We also show that co-purchased firms are similar to the other firms (Table 1, Panel C).

3. Empirical design

In the main analysis, we examine whether dividend policy in a newly co-purchased firm is similar to the dividend policies in the other firms in a co-owner's existing portfolio. Specifically, we examine the relationship between dividends in a newly co-purchased firm and the average dividends of the other firms in a co-owner's portfolio using the OLS methodology. Our empirical strategy exploits the portfolio composition of multiple owners for a single firm per year. We run the following model at a co-purchase level:

$$Div_{i,t+1} = \alpha + \beta PortDiv_{i,t-1} + \delta X_{i,t} + \lambda Z_{i,t} + \varepsilon_{i,t+1} \quad (1)$$

where Div_{it+1} (named *FDIV* in tables) is the firm-year level dividends in firm *i* in year $t+1$, $PortDiv_{i,t-1}$ is the value-weighted average dividends in the portfolio of firms owned in year *t-1* by the co-purchaser of a firm *i.* X is an ownership-related control. Z controls for a set of firm characteristics. We add year and sector fixed effects. ε_{it+1} is the error term clustered at owner-level. Following Crane et al. (2016), Lasfer et al. (2020), Becker et al. (2011), and Graham and Kumar (2006) among the others, we measure our dependent

[2] We use "institutional investors" and "financial owners" interchangeably throughout this paper.

Table 1
Descriptive statistics.

Panel A. Sample overview								
% shares by owner:	mean	stdev	min	max				
1	22.8	14.9	0.2	72.8				
2	9.3	6.2	0.1	38.8				
3	5.8	3.4	0.1	24.4				
4	4.3	2.4	0.1	15.9				
5	3.3	2.1	0	15.7				
TOP 5	45.8	17.5	0	91				
Panel B. Holdings of co-owners								
	Frequency	Shares						
Family	82	8.87						
Financial	842	4.31						
Others	18	5.1						
Observations: 942								
Panel C. Firm characteristics								
	Co-purchased			Non-copurchased				
	Mean	Std.	Obs	Mean	Std.	Obs	Difference	T-stat
ASSETS	12.33	35.62	1139	13.21	38.10	849	−0.88	−0.53
ROA,%	0.68	18.92	1135	0.28	20.18	848	0.40	0.44
RD,%	3.07	7.86	1135	3.92	9.41	848	−0.85	−2.18
CAPEX,%	3.67	4.56	1125	3.88	4.88	840	−0.21	−0.99
LEV,%	49.65	19.56	1135	50.57	20.01	848	−0.92	−1.02
MB	2.95	3.53	1126	3.08	3.41	834	−0.13	−0.81
DIV,%	2.26	2.29	1127	2.19	2.29	834	0.07	0.64

This table presents the descriptive statistics of our sample. Panel A presents the summary statistics of the firm shares held by the top five owners. The first column orders the top five owners. Accordingly, the second column presents the average firm's shares held by these top five owners, respectively. The last three columns present the standard deviations, minimum and maximum values of shares held by these top five owners.
Panel B reports summary statistics of holdings of co-owners. The first column shows the number of observations of co-owners for each respective identity category. The second column shows the shares held by co-owners that belong to the different identity groups. The last two columns show the mean difference tests between the average values of votes and shares.
Panel C presents summary statistics of the characteristics of firms that are co-purchased and not co-purchased. All the variables are defined in the Appendix.

variable, dividends, as dividend yield (in percentage), which is dividend paid per share as a percentage of the share price. In Eq. (1), our coefficient of interest is β. A positive and significant coefficient implies a positive relationship between the dividend policy of the new firm and those of the firms in the co-owner's existing portfolio.

4. Results

4.1. Co-purchasers and dividend policy

The positive and significant coefficient on *PortDIV* of Table 2 suggests that firms whose shares are bought by co-owners have similar levels of dividend yield in the year *after* the co-purchase. A co-purchaser with a one percentage point higher average portfolio dividend yield raises dividend yield by 0.1% point in the newly-invested firm (Table 2, Column 1). The effect is larger in firms co-purchased by owners with high dividend-paying stocks in their portfolios (Table 2, Column 2).[3]

Next, we investigate whether the number of shares the co-purchaser buys in the new firm might affect the future firm dividends. We interact the *PortDIVHigh* variable with the amount of shares purchased. The cross-sectional variation in ownership does not seem to affect shareholders' influence on firms' future dividends (Table 2, Column 3). This finding can be explained by the fact that in Sweden, the largest five owners typically have representatives on nomination committees, which nominate the firm's board members. Therefore, these top five shareholders play similarly important roles in the governance and corporate financial decisions of the firm, regardless of how many shares they own.

Our results are robust to clustering errors at firm level (Table 2, Column 4), controlling for firm governance characteristics - the number of directors and the fraction of independent directors (Table 2, Column 5), using the ratio of dividends to net earnings as in Mancinelli and Ozkan (2006) as a proxy for firm dividends (Table 2, Column 6). Overall, the findings from Table 2 are consistent with the premise that co-owners tend to implement similar strategies across the companies they own.[4]

[3] Results are robust to replacing the level values of dividend yield with the first difference of dividend yield.
[4] Following the literature, we also studied stock repurchases and ran our main regression by using the repurchase variable instead of dividends. We do not obtain significant results, which might be due to the low coverage we have for the stock repurchase data available for Sweden.

Table 2
Co-purchasers and dividend policy.

VARIABLES	(1) FDIV	(2) FDIV	(3) FDIV	(4) FDIV	(5) FDIV	(6) FDIV_E
PortDIV	0.11**			0.11**	0.13**	
	(2.62)			(2.36)	(2.60)	
PortDIVHigh		0.27**	0.33**			
		(2.62)	(2.15)			
Copshares			0.16			
			(0.08)			
PortDIVHigh * Copshares			−1.10			
			(−0.45)			
PortDIV_E						0.08**
						(2.16)
HH Ownership	0.23	0.28	0.27	0.23	0.83	20.65***
	(0.49)	(0.59)	(0.57)	(0.52)	(1.28)	(4.12)
DIV	0.55***	0.55***	0.55***	0.55***	0.45***	
	(11.43)	(11.61)	(11.56)	(9.41)	(7.31)	
ROA	1.09***	1.10***	1.10***	1.09***	0.92***	20.11***
	(5.11)	(5.22)	(4.96)	(3.08)	(2.75)	(3.90)
RD	−1.09***	−1.09**	−1.10**	−1.09	−0.72	10.12
	(−2.64)	(−2.63)	(−2.60)	(−1.52)	(−1.06)	(0.81)
CAPEX	2.71	2.70	2.67	2.71	3.71	16.06
	(1.42)	(1.44)	(1.43)	(1.44)	(1.22)	(0.75)
LEV	−0.56**	−0.55*	−0.54*	−0.56	−0.11	−5.53
	(−2.04)	(−1.95)	(−1.97)	(−1.58)	(−0.29)	(−0.99)
MB	0.01	0.01	0.00	0.01	0.00	0.03
	(0.45)	(0.44)	(0.41)	(0.35)	(0.36)	(0.14)
logASSETS	0.06	0.06*	0.06*	0.06	0.09*	1.15**
	(1.66)	(1.76)	(1.72)	(1.54)	(1.70)	(2.27)
BS					0.04	
					(1.25)	
BI					0.28	
					(0.96)	
DIV_E						0.58***
						(18.23)
Constant	−0.28	−0.20	−0.17	−0.28	−0.91	−15.36
	(−0.50)	(−0.36)	(−0.30)	(−0.44)	(−1.04)	(−1.40)
Observations	942	942	942	942	530	893
R-squared	0.56	0.56	0.56	0.56	0.57	0.53
Cluster	Owner	Owner	Owner	Firm	Owner	Owner

Regressions are at a co-purchase level. Dependent variable, *FDIV (FDIV_E)* is firm's dividend yield (a ratio of dividend to net income) in year $t + 1$. *PortDIV* (*PortDIV_E)* is the weighted average dividend yield (a ratio of dividend to net income) in the portfolio of the co-purchaser one year before the new purchase (t-1). *PortDIVHigh* is a dummy variable taking the value of 1 if an average stock in co-owners' portfolio of stocks pays above year-median dividend yield, and 0 if otherwise (in year t-1). *Copshares* is the total fraction of shares co-purchased in the new firm. All the control variables are measured in year t and defined in the Appendix. All regressions include year and sector fixed effects. The standard errors are clustered at owner level (Columns 1–3, 5–6) and firm level (Column 4). T-statistics are in parentheses.

4.2. Co-purchasers and dividend policy given common owner's characteristics

We investigate if this positive relation between future firm dividends and *PortDIV* varies across the co-purchasers. In Table 3, Columns 1–2, we show that only the co-purchasers that are financial institutions impose their "style" for dividends in the newly-invested companies. Next, in Columns 3–4 we split our sample into high- and low-turnover co-owners, and we observe that the coefficient of *PortDIV* is positive and significant only in the sub-sample of high-turnover co-owners, consistent with (Gaspar et al., 2012).

In Columns 5–6 we show that co-purchasers are better able to implement their dividend style in firms that are in sectors in which the co-purchaser has expertise. Finally, in Columns 7–8 we split the sample based on co-purchasers' portfolio size measured with the number of stocks in the co-purchaser's portfolio before the new purchase and run our main regression specification.[5] We find that co-purchasers with larger portfolios are better able to exert their dividend strategies in their newly invested firms, consistent with credible exit threat (Edmans and Manso, 2011).

[5] Results hold when we use 'portfolio value' instead of number of shares as proxy for portfolio size.

Table 3
Dividend policy and co-purchaser's identity and portfolio turnover.

	Co-purchaser		Portfolio turnover		Expertise		# of stocks in portfolio	
	Fin	nonFin	Low	High	Yes	No	Many	Few
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV
PortDIV	0.12**	0.05	0.05	0.20**	0.18***	0.02	0.30***	0.05
	(2.57)	(0.37)	(0.78)	(2.30)	(3.12)	(0.22)	(3.68)	(1.00)
TurnoverOthers			0.05	0.15*				
			(0.47)	(1.90)				
Observations	842	100	450	451	716	226	513	528
R-squared	0.56	0.61	0.58	0.58	0.55	0.63	0.57	0.58

Regressions are at a co-purchase level. Dependent variable, *FDIV* is firm's dividend yield in year $t + 1$. *PortDIV* is the weighted average dividend (yield) in the portfolio of the co-purchaser one year before the new purchase (t-1). All the independent variables are defined in year t. *TurnoverOthers* is the average turnover of other common owners in a co-purchased firm. All regressions include but the table does not report the following controls that are defined in the Appendix: *HH Ownership, DIV, ROA, RD, CAPEX, LEV, MB,* log*ASSETS*. We split our sample to subsamples depending on whether the co-purchaser is a financial firm (Columns 1–2); the co-purchaser's portfolio turnover is low (Columns 3–4); the co-purchaser owns at least one other firm in the same sector (Columns 5–6); the number of stocks in the co-purchaser's portfolio is many (Columns 7–8). All regressions include year and sector fixed effects. The standard errors are clustered at owner level. T-statistics are in parentheses.

4.3. Co-purchasers and dividend policy in different governance settings

In this section, we investigate whether co-purchasers' ability to influence the dividend policy depends on the newly co-purchased firm's governance setting prior to the co-purchase. Specifically, in Columns 1–2 of Table 4 we show that the positive relation between *PortDIV* and future firm dividends holds only in firms with a low level of institutional ownership concentration, consistent with Ferreira and Matos (2008). Columns 3–4 show that co-purchasers impose their dividend strategies in firms with high heterogeneity among different identity blocks, consistent with Volkova (2018). In Columns 5–8 we show that our main relation is stronger when the largest owner is not a large (family) owner, as agency costs are expected to be higher in firms with no large (family) owners (Edmans and Holderness, 2017; Anderson and Reeb, 2003). Hence, our results are in line with the notion that large (family) owners are powerful and tend to limit institutional investors' initiatives to change dividend policies. Finally, Columns 9–10 show that co-purchasers are better able to implement their strategy on dividends in their newly bought firm where the largest shareholder is not the CEO.[6] Overall, the results in Table 4 suggest that co-purchasers can be more influential regarding their dividend strategies in firms where agency costs are high.

Table 4
Co-owners' Influence in different governance settings.

	HH ownership		Ownership identity diversity		Largest owner's fraction of votes		Largest owners' identity		Largest owner is CEO	
	High	Low	High	Low	High	Low	FamInd	nonFamInd	Yes	No
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV	FDIV
PortDIV	0.02	0.16**	0.15**	0.09	0.03	0.16**	0.06	0.16*	0.03	0.09**
	(0.41)	(2.50)	(2.06)	(1.35)	(0.49)	(2.41)	(1.15)	(1.86)	(0.28)	(2.13)
Observations	476	466	375	365	468	474	625	317	104	794
R-squared	0.58	0.59	0.60	0.62	0.59	0.59	0.62	0.58	0.78	0.57

Regressions are at a co-purchase level. Dependent variable, *FDIV* is firm's dividend yield in year $t + 1$. *PortDIV* is the weighted average dividend (yield) in the portfolio of the co-purchaser one year before the new purchase (t-1). All the independent variables are defined in year t. All regressions include but the table does not report the following controls that are defined in the Appendix: *HH Ownership* (except in Columns 1–2), *DIV, ROA, RD, CAPEX, LEV, MB,* log*ASSETS*. We split our sample to subsamples depending on whether the ownership concentration is high (Columns 1–2); ownership identity diversity is high (Columns 3–4); the largest owner has many votes (Columns 5–6); the owner is a family (group) or individuals (Columns 7–8); the largest owner is the CEO (Columns 9–10). All regressions include year and sector fixed effects. The standard errors are clustered at owner level. T-statistics are in parentheses.

[6] We obtain similar results when we consider the founder at the place of the CEO.

Table 5
Firm level determinants of co-purchase.

	(1) Copurchase	(2) CopurchaseFin	(3) CopFinHDIV
Panel A			
LDIV	−0.69	−0.53	0.39
	(−0.97)	(−0.76)	(0.59)
Constant	0.52	0.49	0.10
	(1.31)	(1.29)	(0.29)
Observations	1806	1806	1806
R-squared	0.00	0.01	0.01
Panel B			
DivPr	0.01	0.01	0.00
	(0.40)	(0.78)	(0.27)
Observations	1517	1517	1509
R-squared	0.01	0.01	0.01

Regressions are at a firm-year level. Dependent variables are defined at year t, and explanatory ones at year t-1. *Co-purchase* is a dummy variable taking value of 1 if the firm is newly co-purchased by at least one co-owner (common owner being a large owner, that is among the top five owners, investing in at least two firms), and 0 if otherwise; *Co-purchaseFin* is a dummy variable taking value of 1 if the new co-purchase is done by a financial institution; *CopFinHDIV* is a dummy variable taking the value of 1 if the new co-purchase is done by a financial institution that holds high dividend-paying firms in its portfolio one year prior to the purchase; *LDIV* is firm's dividend yield. *DivPr* (in panel B) is the firm's predicted dividend yield, i.e., the fitted value of a regression of *DIV* (*dividend yield*) on concurrent controls: *HH, ROA, RD, CAPEX, LEV, MB,* log*ASSETS, industry* and *year dummies*. All regressions include but the table does not report the following controls that are defined in the Appendix: *HH Ownership, DIV, ROA, RD, CAPEX, LEV, MB,* log*ASSETS*. All regressions in Panels A and B include firm fixed effects, and the standard errors are clustered at firm level. T-statistics are in parentheses.

5. Endogeneity

Do co-owners purchase firms with similar dividend strategies? Or do they purchase firms with different dividend strategies, subsequently rendering them similar to their own dividend style? To mitigate such endogeneity concerns, we implement several tests.

First, we examine whether a firm's past dividend yield determines co-purchasing activities. In Panel A of Table 5, we show that past firm dividends are unable to explain any of the following proxies of a co-purchase: 1) the probability of being co-purchased (Column 1); 2) the probability of being co-purchased by an institutional investor (Column 2); 3) the probability of being co-purchased by an institutional investor who holds high dividing paying firms in their portfolio prior to the co-purchase (Column 3). The estimates in Panel A of Table 5 suggest that co-owners are unlikely to purchase firms with similar dividend strategies.

Second, future co-owners may be able to forecast the potential for a change in firms' dividends and buy shares of those firms. Specifically, we speculate that future co-owners may base their investment strategies not on current but predicted dividends, and they will base their predictions of future dividends on public information. We examine whether the *predicted* firm dividend yield is related to the co-purchases. We regress the dividend on all our controls in Eq. (1) at time *t* and save the fitted values, *DivPr*. Those values should capture the common trend in dividends, which could be forecasted by managers. In Table 5, Panel B, we use the same model as in Panel A, but replace the lagged dividend with the fitted ones, *DivPr*. The results show that predicted dividend yield does not explain any of the proxies of a co-purchase. Lastly, we investigate our main relation for dividend payers versus non-dividend payers. In Table 6 we show that that our dividend "style" effect is significant in both dividend and non-dividend payers.

6. Conclusion

This paper contributes to the common ownership literature. We find that firms' dividend yield is positively related in the new and the existing firms in a common owner's portfolio. This relationship is significant mainly when the co-owner is a financial institution. We also show that co-owners' portfolio characteristics and governance of the newly-invested firm are important in the implementation of the dividend strategies of the co-owner.

Our findings are particularly relevant for non-financial informed investors willing to invest in a firm controlled by common owners. These investors should consider that common owners have a dividend style and such firms may not provide a good diversification strategy in terms of dividends. When picking firms for their portfolios, investors should take into account the existence of common

Table 6
Co-purchasers and dividend policy in dividend payers vs. non-payers.

	Dividend Payers (1) FDIV	Non-dividend Payers (2) FDIV
PortDIV	0.11** (2.01)	0.13** (2.29)
Observations	595	350
R-squared	0.32	0.25

Regressions are at a co-purchase level. Dependent variable, *FDIV* is firm's dividend yield in year $t + 1$. *PortDIV* is the weighted average dividend (yield) in the portfolio of the co-purchaser one year before the new purchase (t-1). All the independent variables are defined in year t. All regressions include but the table does not report the following controls that are defined in the Appendix: *HH Ownership, DIV, ROA, RD, CAPEX, LEV, MB,* log*ASSETS*. We split our sample into subsamples based on whether the firm is paying (Column 1) or not paying (Column 2) dividends in year t-1. All regressions include year and sector fixed effects. The standard errors are clustered at owner level. T-statistics are in parentheses.

owners. Moreover, our findings define settings in which investors can be more influential in the firm's dividend policy and may be relevant for prospective common owners 'with an agenda'.

Supplementary material

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.frl.2020.101779.

Appendix

A1. Definition of variables

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Variables of interest	Definition	Mnemonics (Data source)
Co-purchase	Dummy variable taking value of 1 if the firm is newly co-purchased by at least one co-owner (common owner being a large owner, that is among the top five owners, investing in at least two firms), and 0 if otherwise.	Ägare; Kapital (Modular)
PortDIV	Weighted average dividend (yield) in the portfolio of the co-purchaser one year before the new purchase.	Ägare; Kapital (Modular) &DY (Datastream)
PortDIVHigh	Dummy variable taking value of 1 if an average stock in co-owners' portfolio of stocks pays above year-median dividend yield, and 0 if otherwise.	Ägare; Kapital (Modular) &DY (Datastream)
Copshares	Total fraction of shares co-purchased in the new firm.	Ägare; Kapital (Modular)
Co-purchaseFin	Dummy variable taking value of 1 if the new co-purchase is done by a financial institution, and 0 if otherwise.	Ägare; Kapital (Modular)
CopFinHDIV	Dummy variable taking value of 1 if the new co-purchase is done by a financial institution that holds high dividend-paying firms in its portfolio one year prior to the purchase, and 0 if otherwise.	Ägare; Kapital (Modular) &DY (Datastream)
Other ownership Characteristics		
HH Ownership	Sum of the squared ratios of the top five institutional investors' holdings over total ownership.	Ägare; Röster (Modular)
Fraction of votes	% of votes held by the owner.	Ägare; Röster (Modular)
Identity	Dummy variables created to represent the identity of the owner. It takes value of 1 if the owner is: a) family (groups) or individuals, b) financial institution, c) others; and 0 if otherwise.	Ägare (Modular)
Ownership Identity Diversity	One minus the sum of squared ratios of the different identity's shares over total firm shares.	Ägare; Kapital (Modular)
Largest Owner CEO	Dummy variable that equals 1 if the largest owner is the CEO.	Ägare; Kapital (Modular & annual reports)
# of stock in portfolio	Total number of stocks in the portfolio of the co-purchaser.	Ägare; Kapital; # (Modular)
Portfolio Turnover	Following Gaspar et al. (2012), we define the annual portfolio turnover as the ratio of purchases and sales over one year in SEK normalized by SEK value of the portfolio by excluding the co-purchased firm.	Ägare; Kapital (Modular)
TurnoverOthers	Average turnover of other common owners in a co-purchased firm.	Ägare; Kapital (Modular)
Expertise	Dummy variable that takes value of 1 if a co-purchaser owns at least one other firm in the same sector, and 0 if otherwise.	Ägare; Kapital (Modular) & Sector (Modular)
Control Variables	Definition	Mnemonics (Data source)
DIV	Dividend yield which is dividend per share as a percentage of the share price.	DY (Datastream)

(*continued on next page*)

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Variables of interest	Definition	Mnemonics (Data source)
ROA	Return on Assets is calculated as net income over total assets.	WC01751/ WC02999 (Datastream)
RD	Research and development expenses over total assets.	WC01201 (Datastream)
CAPEX	Capital expenditures over total assets.	WC04601 (Datastream)
LEV	Total liabilities over total assets.	WC03351/ WC02999 (Datastream)
MB	Market-to-book ratio.	MTBV & MV/ WC02999 (Datastream)
ASSETS	Natural logarithm of total assets.	WC02999 (Datastream)
BS	Number of total directors that serve on the firm boards.	Director Count Totals (Boardex)
BI	Fraction of independent directors that serve on the firm boards.	Director Count Totals (Boardex)

This table presents the definitions of all variables used in this study.

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